FRENKEL', M.B., inzhener

Cement raw material granulation in the method manufacturing process.
TSement 21 no.4:9-12 Ag'55. (MLRA 8:11)
(Cement industries)

FRENKEL, M. B

32-2-21/60

AUTHOR: Frenkel', M. B.

TITLE: Accelerated Method for the Determination of the Mechanical Strength of Grains (Uskorennyy metod opredeleniya mekhanicheskoy prochnosti granul)

PERIODICAL: Zavodskaya Laboratoriya, 1958, Vol. 24, Nr 2, pp. 184-185 (USSR)

ABSTRACT: The mechanical strength of grains consisting of various raw materials, which hitherto was investigated by means of a rotating drum, is according to this method examined by vibration sieves. The duration of the investigation is substantially shortened and is given to be from 5 - 10 minutes. An amount of from 50 - 100 grams of the grains to be investigated were sieved on a (Nr 200) vibration sieve and the dust produced by mechanical friction, which passes through the sieve, is weighed. A table containing the results for grains with or without an addition of 3 and 5 % of clay, as well as of 1 and 3 % of melasse, according to the method with porcelaine

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Accelerated Method for the Determination of the Mechanical Strength of Grains

drums and to the method with the mechanical sieve is given, from which it can be seen, that the results are very close to each other with this duration of experiment (10 minutes). There is 1 table.

ASSOCIATION: All-Union Scientific Research and Design Institute Yuzhgiprotsement, Khar'kov
(Vsesoyuznyy nauchno-issledovatel'skiy i proyektnyy institut Yuzhgiprotsement, g. Khar'kov)

AVAILABLE: Library of Congress

1. Grains (Metallurgy)-Mechanical properties

15(6) PHASE I BOOK EXPLOITATION SOV/2521

Bernshteyn, Leonid Abramovich, and Mikhail Borisovich Frenkel'

Granulyatsiya tsementnykh syr'yevykh smesey pri sukhom i mokrom sposobakh podgotovki (Granulation of Raw Cement Mixes by Dry-and-Wet-Processing Methods) Moscow, Gosstroyizdat, 1959. 98 p. 2,200 copies printed.

Ed. of Publishing House: M.S. Tyutyunik; Tech. Ed.: T.M. Prusakova.

PURPOSE: This book is intended for engineering and technical personnel engaged in cement production.

COVERAGE: The authors discuss the theoretical and practical aspects of the granulation of cement raw materials by dry and wet methods. The concluding section deals with quality control. A.F. Lebedev, A.M. Vasil'yev, P.A. Rebinder, Academician, B.V. Deryagin, A.M. Parfenov, N.A. Nechiporenko, S.M. Meyerov, S.T. Rostovtsev, Ye.I. Khodorov, B.A. Petrov, and V.A. Nelidov are mentioned for their contributions in the field. There are 55 references: 52 Soviet, 2 German, and 1 English.

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TABLE OF CONTENTS:

AVAILABLE: Library of Congress

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GO/gmp
10-29-59

15(6)

SOV/101-59-2-2/13

AUTHORS: Syrkin, Ya. M., Frenkel', M. B. and Kripitser, A. M.

TITLE: Quick-Setting Slag Portland Cements

PERIODICAL: Tsement, 1959, Nr 2, pp 3-6 (USSR)

ABSTRACT: The authors state that in 1960 the cement industry has to increase the symbol mark of cement to "425", and stop the production of cement below the "300" mark. Various ways have been proposed in order to achieve a better crushing strength of cement. P.P. Budnikov, G.A. Sokhatskaya, I.I. Kholin, A.L. Gershuns, I.L. Znachko-Yavorskiy, M.I. Strelkov, M.G. Kashperskiy, I.D. Zaporozhets, V.V. Kind, V.I. Satarin, F.F. Ladygin, A.A. Panarina and G.V. Kalishchuk, all studied manufacturing details which should improve the qualities of cement. Problems concerning the grounding fineness, mineralogical composition of the slag cements, and addition of the hardening acceleration ingredients of the slag portland cements were under construction. Yuzhgiprotsement (Southern Planning

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Quick-Setting Slag Portland Cements

Institute for Cement Industry Enterprises) has studied the problem of obtaining quick-hardening slag-portland-cement, with a hardening intensity similar to that of the portland-cement marked "400" - "500" for several years. Such cement might be obtained for rammed and plastic solutions under the following conditions: the cement composition must contain not less than 50% clinker and the fineness of the ground mixture, clinker - slag - gypsum, must attain 4000 to 5000 cm^2/g. Clinker must contain tricalciumsilicate (C_3S) 50 to 60% and tricalciumaluminate (C_3A), not less than 6%. At the Dneprodzerzhinskiy tsementnyy zavod (Dneprodzerzhinsk Cement Plant) for slag-portland-cement, the optimum gypsum dosing is 5%, as shown in diagram 1. Diagram 2 shows that an increase in the fineness of ground slags, above the specific surface of 3000 to 4000 cm^2/g, has little practical significance in relation to the crushing strength of cement. Tables 1 and 2 show chemical and mineralogical compositions of clinker, and the chemical composition of blast furnace

Quick-Setting Slag Portland Cements

granulated slags, obtained at the Dneprodzerzhinsk Cement Plant, and of mixed slags, in proportion 1 : 1, produced by Krivorozhskiy and Dneprodzerzhinskiy metallurgicheskiye zavody (Krivoy Rog and Dneprodzerzhinsk Metallurgical Plants), respectively. The results of experiments carried out at the plant and at the institute of the Southern Planning Institute for Cement Industry Enterprises are compiled in tables 3 and 4, showing mechanical properties of the quick-hardening slag-portland-cement (rammed solution 1:3) and of the same cement (plastic solution), respectively. Table 5 shows the strength of the concrete made of portland cement "500", produced by the Belgorodskiy tsementnyy zavod (Belgorod Cement Plant). Diagrams 3 and 4 show the possible schemes of the two stage grinding of mixed material for cement manufacturing. From the experiments carried out by the Southern Planning Institute for Cement Industry Enterprises it is seen that the prime costs of the quick-setting slag-portland-cement are 25 - 30% lower than such costs of the portland-cement of the same marks.

Quick-Setting Slag Portland Cements

It is projected, in 1959, to realize a mass production of the quick-hardening slag-portland-cement at a series of plants in the USSR. There are 2 diagrams, 2 graphs and 5 tables.

SYRKIN, Yakov Moiseyevich; FRENKEL', Mikhail Borisovich. Prinimal uchastiye STRELKOV, M.I., kand.tekhn.nauk; KOMENDANT, K.P., red.; ZELENKOVA, Ye.Ye., tekhn. red.

[Chemistry and technology of slag portland cement] Khimiia i tekhnologiia shlakoportlandtsementa. Kiev, Gosstroiizdat USSR, 1962. 176 p. (MIRA 15:7)

(Portland cement)

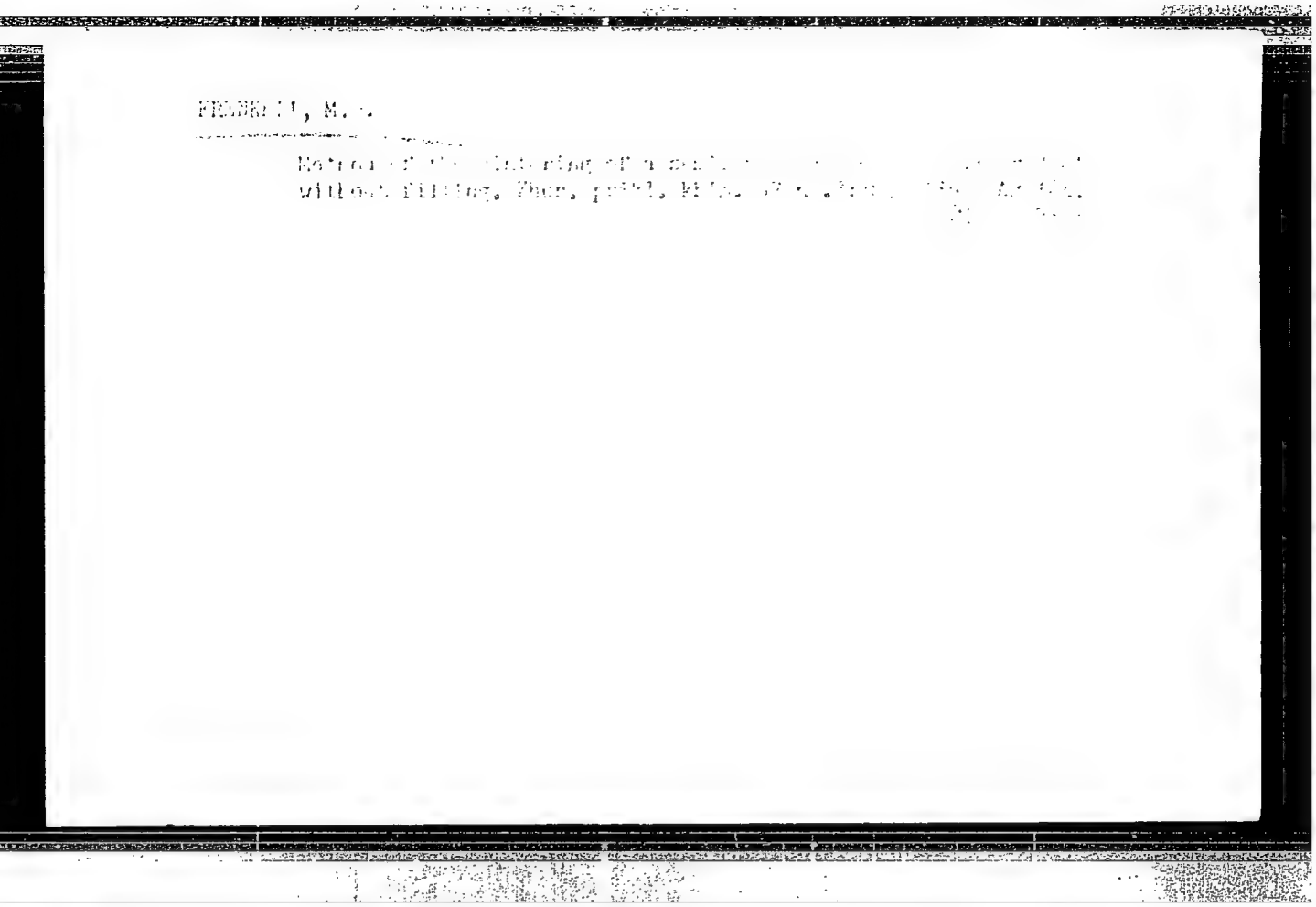
SYRKIN, Ya.M.; FRENKEL', M.B.; NOVOSEL'SKIY, L.G.; MEL'NICHENKO, N.P.; LEVYATOVA, L.I.

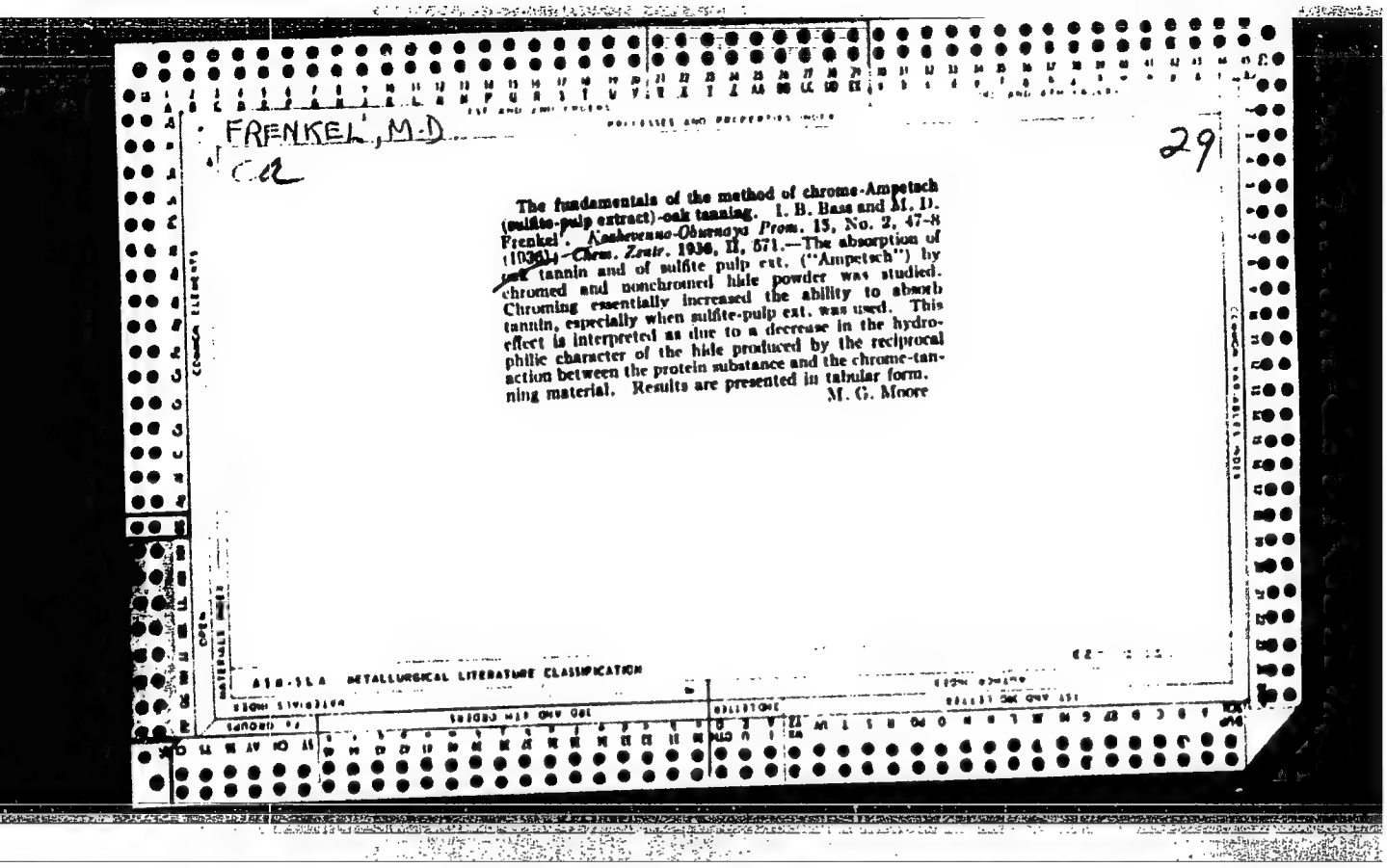
Industrial mastering of the production of quick-hardening slag portland cement at the Kharkov Cement Plant. Trudy IUzhgiprotsementa no.4:127-143 '63.

(MIRA 17:11)

SATARIN, Vladimir Ivanovich; FRENKEL', Mikhail Borisovich; TYUTYUNIK, M.S., red.izd-va; SHERSTNEVA, N.V., tekhn. red.

[Cement industry abroad] TSementnaia promyshlennost' za rubezhom. Moskva, Gosstroiizdat, 1963. 293 p. (MIRA 16:6)
(Cement)





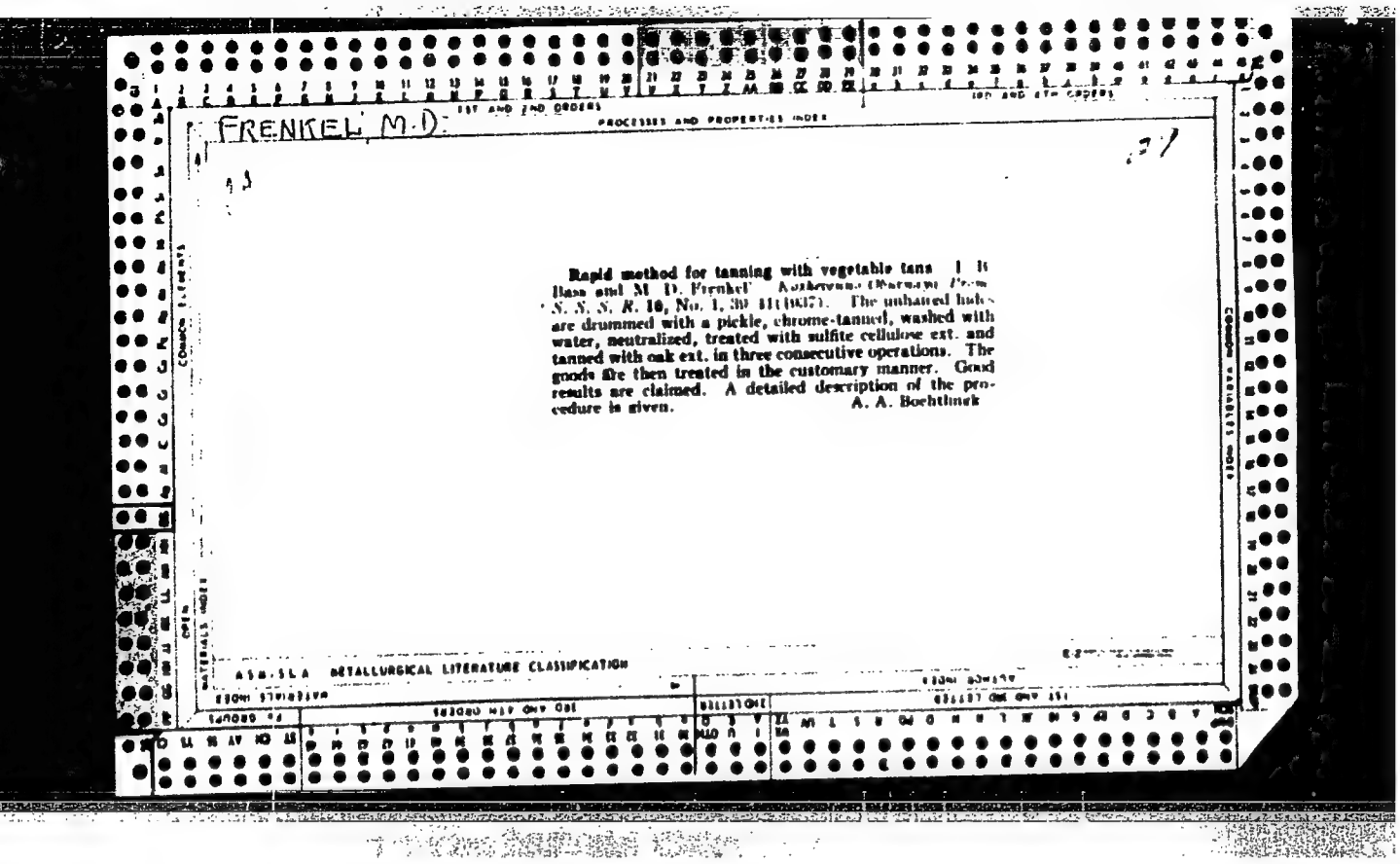
FRENKEL, M-D

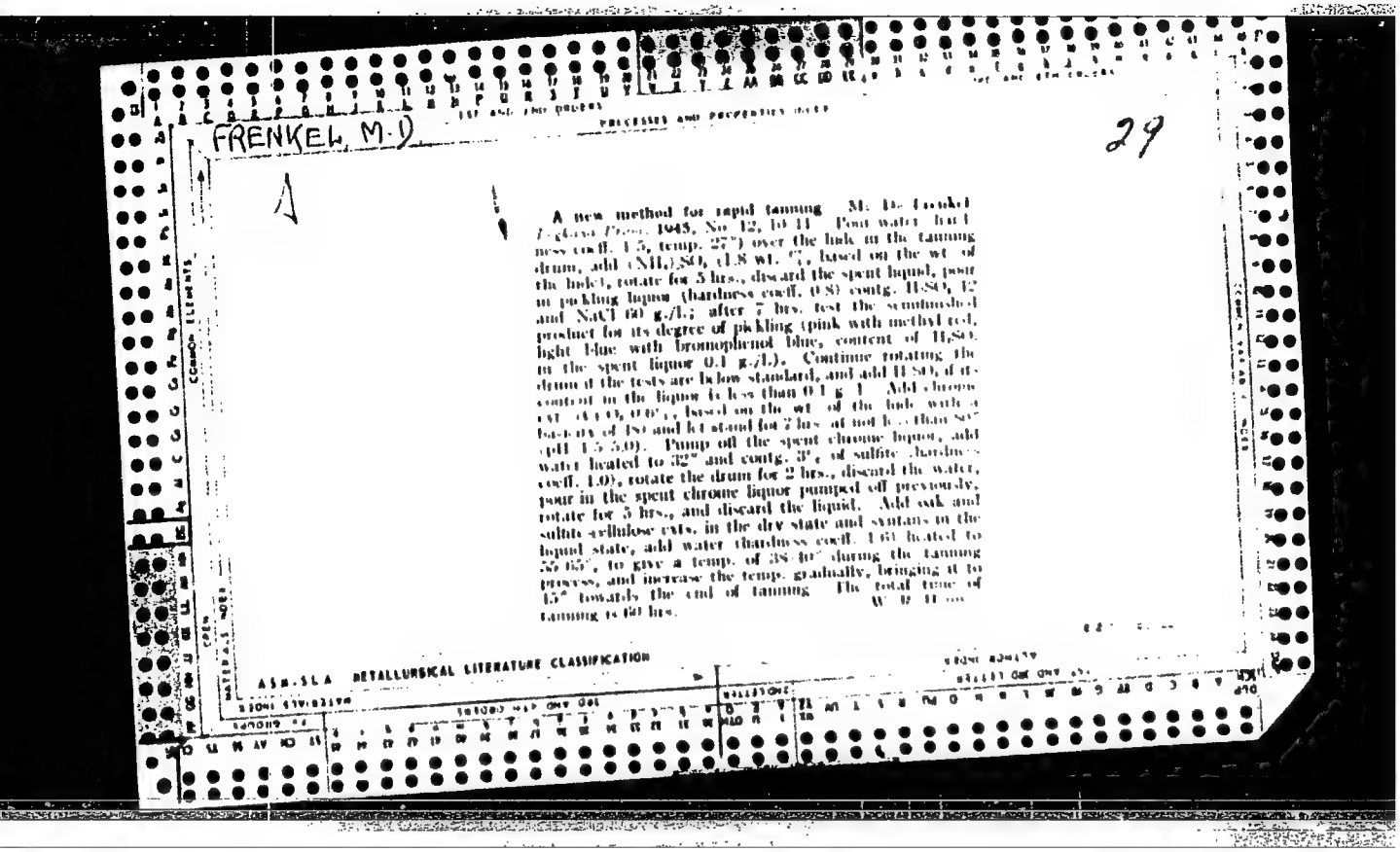
29

The fundamentals of the method of chrome-Ampetsch (sulfite-pulp extract)-oak tanning. I. B. Bass and M. D. Frenkel. *Kozhevenno-Obuvnaya Prom.* 13, No. 2, 47-8 (1936).—*Chem. Zentr.* 1936, II, 571.—The absorption of oak tannin and of sulfite pulp ext. ("Ampetsch") by chromed and nonchromed hide powder was studied. Chroming essentially increased the ability to absorb tannin, especially when sulfite-pulp ext. was used. This effect is interpreted as due to a decrease in the hydrophilic character of the hide produced by the reciprocal action between the protein substance and the chrome-tanning material. Results are presented in tabular form.

M. G. Moore

A16-51A METALLURGICAL LITERATURE CLASSIFICATION





FRENKEL, M.D

29

A new method for rapid tanning. M. D. Frenkel (Leather Prod., 1945, No. 12, 10-11). Pour water (hardness coeff. 1.5, temp. 27°) over the hide in the tanning drum, add $(NH_4)_2SO_4$ (1.8 wt. %, based on the wt. of the hide), rotate for 5 hrs., discard the spent liquid, pour in pickling liquor (hardness coeff. 0.8) contg. H_2SO_4 12 and NaCl 60 g./L.; after 7 hrs. test the semimodel product for its degree of pickling (pink with methyl red, light blue with bromophenol blue, content of H_2SO_4 in the spent liquor 0.1 g./L.). Continue rotating the drum if the tests are below standard, and add H_2SO_4 if its content in the liquor is less than 0.1 g./L. Add chrome tan (4.0, 6.0%, based on the wt. of the hide with a basicity of 1%) and let stand for 2 hrs. at not less than 30° (pH 4.5-5.0). Pump off the spent chrome liquor, add water heated to 32° and contg. 3% of sulfite-liquor coeff. 1.0), rotate the drum for 2 hrs., discard the water, pour in the spent chrome liquor pumped off previously, rotate for 5 hrs., and discard the liquid. Add oak and sulfite-cellulose ext., in the dry state and sumac in the liquid state, add water (hardness coeff. 1.0) heated to 55-65°, to give a temp. of 38-40° during the tanning process, and increase the temp. gradually, bringing it to 45° towards the end of tanning. The total time of tanning is 60 hrs.

W. B. H.

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

FRENKEL', M.D.; DVORKINA, T.V.; DOBIN, Ya.I.

Modification of Wick apparatus for determining the thermal stability of plastics. Plast. massy no.11:57-58 '63.
(MIRA 16:12)

SMUSHKOVICH, B.L.; FRENKEL', M.D.; GROMOV, S.S.

New apparatus for determining the heat resistance of plastics. Plast. massy no.12:53-54 '63. (MIRA 17:2)

S/191/60/000/009/008/010
B013/B055

15.8500

AUTHORS: Ratner, S. B., Frenkel', M. D., Novozhilov, A. V.

TITLE: Mechanical Testing of Plastics. 5. Testing of Heat Resistance

PERIODICAL: Plasticheskiye massy, 1960, No. 9, pp. 69 - 76

TEXT: This publication deals with heat resistance tests of plastics based on the widespread thermomechanical testing methods, i.e., the examination of changes in mechanical properties produced by temperature changes (Figs.1 - 7, Tables 1 - 4). The upper limit of heat resistance of vitrified plastics is the temperature range at which rapid softening occurs. For these plastics the softening point corresponds to the vitrification point $T_{vitr.}$. With crystalline polymers, the limit of heat resistance is not the $T_{vitr.}$ but practically coincides with the melting point (Ref.1). It is generally known (Ref.2) that the $T_{vitr.}$ is no matter constant since it varies with test conditions. The softening process is strongly affected by the load (Refs.15-17). In the case of some thermo-

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plasts, softening was observed to be a linear function of the load (Refs.15,17). Various thermosetting materials exhibited the same dependence (Figs.2 and 3). It was shown that the softening point drops with increasing load according to $T = T_0 - bP$, where T_0 = softening point without load, and b = change in heat resistance per unit load. Since T_0 is a characteristic load-independent vitrification point of the material, it must correspond to the vitrification point determined by any method unaffected by other factors, e.g., dilatometrically. This is the case both with thermosetting plastics (Fig.4) and thermoplasts. These data show that the dilatometric method may be recommended for testing heat resistance. It must, however, be noted that its lower sensitivity renders it less effective than the method of thermomechanical curves. The most complete characterization of the heat resistance requires determination of T_0 and b. For this, tests at 2 - 3 different loads, at the minimum, are necessary. Industrial methods generally apply only one and the same load (P = const) for testing different types of materials. This results in more or less fortuitous test results which are high for hard materials and low for soft materials. In rapid quality control it is advisable to test heat resistance

Mechanical Testing of Plastics. 5. Testing of Heat Resistance

S/191/60/000/009/008/010
B013/B055

at a load proportional to the initial hardness of the material, i.e., at equal initial deformation (ε_0 = const) (Fig.5, Table 2). Widely differing indices are obtained by heat resistance tests under different preset conditions (P = const or ε_0 = const) (Figs.6 and 7, Tables 3 and 4). Apart from regulations concerning the general characteristic, the temperature of heat resistance, specifications should also include regulations concerning the heat resistance coefficients of durability and other indices, in accordance with the application of the material or the working conditions the product is to be subjected to. A. P. Aleksandrov is mentioned. There are 7 figures, 4 tables, and 29 references: 23 Soviet, 3 German, 2 US, and 1 Czechoslovakian.

Card 3/3

ACCESSION NR: AP4009840 S/0191/64/000/001/0068/0071

AUTHORS: Ramzaytsev, V.D.; Volchek, I.S.; Dvorkina, T.V.; Krichmar, G. Ya.; Luzhkov, Yu. M.; Frenkel', M.D.

TITLE: Experimental automation of plastic testing for heat resistance

SOURCE: Plasticheskiye massy*, no. 1, 1964, 68-71

TOPIC TAGS: plastic materials testing device, testing plastics heat resistance, testing plastics deformation

ABSTRACT: Since standard installations for testing heat resistance and deformation of plastic materials are very imperfect, inaccurate, slow and subject to mistakes due to reliance on visual observation, an automatic device programmed for measurement and recording of temperature has been designed. Described in detail, this device, which can be used wherever thermomechanical tests are made as well as in dilatometry, basically consists of an EPP-06M1 potentiometer,

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ACCESSION NR: AP4009840

program controls, measurement and recording of temperature, automatic measurement and recording of deformations, and automatic changes of operation rate. Thermocouples, electronic probes, amplifiers, differential transformer induction systems, and measuring bridges are used in the circuit and their functions are also described. Orig. art. has 7 figures, no formulas, no tables.

ASSOCIATION: None

SUBMITTED: 00	DATE ACQ: 10Feb64	ENCL: 00
SUB CODE: AP	NO REF SOV: 006	OTHER: 000

Card 2/2

FRENKEL', M.D.; DVORKINA, T.V.; TATEVOS'YAN, G.O.

Methods for the determination of the brittleness temperature for plastics. Standartizatsiia 28 no.1:45-53 Ja '64. (MIRA 17:1)

L 10816-65 EPA(s)-2/EWT(m)/EPF(c)/EPR/EWP(j)/T Pc-4/Pr-4/Ps-4/Pt-10 RM/WW

ACCESSION NR: AP4046903 S/0191/64/000/010/0062/0064

AUTHOR: Farberova, I. I.; Shleyfman, R. B.; Senatskaya, T. M.; Frenkel', M. D.; Kogan, A. M.

TITLE: Effect of fillers on the physical and mechanical properties of polypropylene

SOURCE: Plasticheskiye massy*, no. 10, 1964, 62-64

TOPIC TAGS: polypropylene, filler, polymer physical property, polymer mechanical property, gas black, titanium dioxide, talc, asbestos, fiber glass, thermal stability, hardness, tensile strength, impact strength

ABSTRACT: The dynamic properties of polypropylene compositions (ash content 0.2-0.8%) containing 0.6—0.7% FSF-24 stabilizer were investigated after the addition of varying amounts of powdered or fibrous fillers (gas black, titanium dioxide, talc, asbestos and fiber glass). The experimental techniques for preparing the samples (pressure casting on a Ziegler machine for powdered fillers and direct pressing for fibrous fillers) and determining their strength and hardness are described. Tabulated data show that impact and tensile strength were decreased by the addition of asbestos. Addition of large amounts (40%) of powdered fillers also decreased the impact strength, strength, and hardness, but smaller amounts (5—10% led to an improvement in the mechanical properties. Thus, the tensile strength

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L 10816-65 3
ACCESSION NR: AP4046903

increased to a maximum at 5% TiO_2 or talc, and the relative elongation at break increased to a maximum at 5% gas black or talc and 10% TiO_2. The changes in abrasion resistance, which generally paralleled the changes in tensile strength, are shown in Fig. 1 of the Enclosure. The compressive strength, bending strength, and Brinell hardness, however, were generally decreased by 5—10% filler. The thermal stability (Vicat) of polypropylene was essentially unaffected by the addition of fillers, the required stress decreasing linearly with increasing temperature for all samples. "The authors express their gratitude to S. B. Ratner for his evaluation of the results and valuable advice. M. M. Turok and Ts. K. Matevosyan helped to prepare the samples." Orig. art. has: 4 figures, 2 tables, and 1 formula.

ASSOCIATION: none

SUBMITTED: 00 ATD PRESS: 3117 ENCL: 01

SUB CODE: OC, MT NO REF SOV: 007 OTHER: 000

Card 2/3

L 10816-65
ACCESSION NR: AP4046903

ENCLOSURE: 01

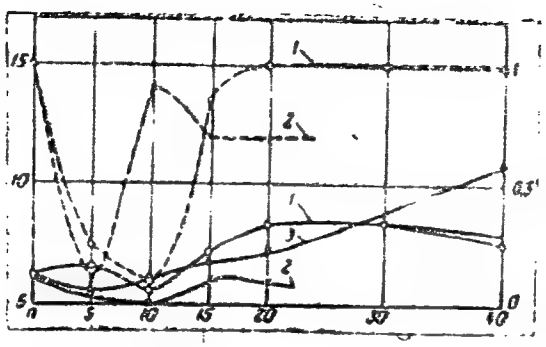

Fig. 1. Relationship between the wear of a polypropylene composition and the filler content. Solid lines: abrasion in sheet form (left-hand ordinate); dotted lines: abrasion in mesh form (right-hand ordinate). Filler: 1 - gas [illegible] SiO_2; 3 - talc. Ordinates: wear in $mm^3/m \cdot cm^2$; abscissa: filler content in wt.%.

Card 3/3

S/[illegible]/65/[illegible]/[illegible]/3044

[illegible]enko, M. D.; Ratner, S. B.

TITLE: Properties and use of plastics. 2. A study of the temperature of brittleness of plastics

SOURCE: Plasticheskiye massy, no. 4, 1965, 39-44

TOPIC TAGS: brittleness, brittle point, brittle state, elasticity, material strength/ M 71 resin, PE 150 polyethylene, PVKh plasticate

ABSTRACT: Experiments to determine the effects of temperature upon the brittleness of certain plastics were performed. Particular emphasis was given to the temperature range in which the plastics undergo transition from an elastic to a brittle condition. The stress and strain characteristics of five plastics were measured against varying temperatures. Figure 1 on the Enclosure shows the nature of the experimental data. Three temperatures sought were: T_c - the vitrification temperature, T_t - the temperature of transition from large destructive elongation to small elongation, T_s - the temperature at which the strength limit corresponds to the limit of forced elasticity. Testing methods followed the precepts set forth in ASTM (Standards on Plastics, D746-57T, 1958), and those prescribed by P. N. Bestelink and

Card 1/[illegible]

L 47337-65
ACCESSION NR: AP5009319

S. Turner (ASTM Bulletin, No. 231, 68, 1958). The transition temperature interval for the plastics tested is given in a table (see Fig. 2 on the Enclosure). Additional tests were conducted to determine the effect of specimen thickness in resisting impact deflections. The authors conclude that even below the [illegible] temperature there is an intermediate brittle-elastic region. The [illegible] more homogeneous the material, the larger is this temperature region, and, in general, the inhomogeneity of test materials is responsible for the diversity in the temperatures cited. The authors thank T. V. Dvorkina and L. F. Yakovleva for assisting in [illegible]. Orig. art. has: 7 figures.

ASSOCIATION: none

SUBMITTED: 00 ENCL: 02 SUB CODE: MT

NO REF SOV: 010 OTHER: 005

Card 2/4

L 58978-65 EWT(m)/EPF(c)/EWP(j) Pc-4/Pr-4 RM

ACCESSION NR: AP5014695 UR/0191/65/000/006/0050/0052 678.01: 539.42

AUTHOR: Smushkovich, B.L.; Frenkel', M.D.; Mukhin, Ye. P.; Bobrov, S.L.; Matrosov, A.N.; Dvorkina, T.V.

TITLE: New instrument for determining the brittle temperature of plastics

SOURCE: Plasticheskiye massy, no. 6, 1965, 50-52

TOPIC TAGS: brittle point, polyvinyl chloride, plastic mechanical property, brittle temperature determination

ABSTRACT: The PKhP-1 instrument for determining the brittle temperature of plastics is described in detail. This instrument is designed for testing 10 specimens simultaneously under identical conditions, and thus the reproducibility of the results is greatly enhanced. It is also capable of operating under both static and dynamic conditions. The cooling system using liquid nitrogen is also described. The time required to bring the test specimen to any given temperature is reduced to a minimum both in heating and in cooling. The instrument is built as a table model (1140 mm long, 700 mm wide, 1350 mm high; weight 190 kg). As an example, the results of testing plasticized polyvinyl chloride under static

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ACCESSION NR: AP5014695

and dynamic conditions are cited. The brittle temperature was calculated from the formula

$$T_x = T' + \Delta T\left(\frac{S}{100} - \frac{1}{2}\right)$$

where T_x is the temperature corresponding to the failure of 50% of the test samples; T' is the highest temperature at which all the samples fail; ΔT is the selected temperature interval for consecutive tests (e.g., 2C); and S is the sum of the fractured samples from the temperature at which none of the samples failed up to T' inclusive. As expected, the results show that the brittle temperature is significantly affected by the rate of the applied mechanical action. The method and instrument employed yield highly reproducible data. Orig. art. has: 3 figures, 1 table, and 1 formula.

ASSOCIATION: none

SUBMITTED: 00 ENCL: 00 SUB CODE: MT

NO REF SOV: 005 OTHER: 000

dm

FRENKEL', M.G.

Determining the unevenness of spun products from samples of various lengths. Izv.vys.ucheb.zav.; tekh.tekst.prom. no.2:30-35 '60.
(MIRA 13:11)

1. Moskovskiy tekstil'nyy institut.
(Spinning)

POSTNIKOV, N.N.; FRENKEL', M.G.; YEVZLINA, B.B.; SMIRNOV, A.I.; PLOTNIKOVA, V.I.

Composition and properties of defluorinated phosphates. Zhur. prikl. khim. 31 no.10:1453-1460 O '58. (MIRA 12:1)
(Phosphates)

POSTNIKOV, N. N., doktor tekhn. nauk; FRENKEL', M. G., kand. tekhn. nauk

Production of phosphoric acid and concentrated fertilizers based on the electrothermal treatment of phosphates. Zhur. VKHO 7 no.5:500-506 '62. (MIRA 15:10)

(Phosphoric acid)
(Fertilizers and manures)

1. ASLANOV, G. V.; GET'YE, V. A.; GUREVICH, YE. S.; LUBENETS, V. D.; SAMSONOV, N. M.; SEKUNOVA, O. N.; SIMONOVSKIY, I. V.; FRENKEL', M.; KRAPUNOV, B. P.

2. USSR (600)

4. Valves

7. Problem of the priority of Soviet science in examining the operation of spring-loaded valves. (Letters to the editor.) Vest. mash. 32 No. 11, 1952.

9. Monthly List of Russian Accessions, Library of Congress, April 1953, Uncl.

FRENKEL, M. I.

Porshnevye kompressory; teoriia, konstruktsii i osnovy proektirovaniia. Moskva, Mashgiz, 1949. 395 p. illus.

Piston compressors; theory, structures and principles of designing.

DLC: TJ990.F66

SO: Manufacturing and Mechanical Engineering in the Soviet Union, Library of Congress, 1953.

FRENKEL', M.I., kandidat tekhnicheskikh nauk

Static characteristic method of comparing automatic valves.
Sbor. st. NIIKHIMMASH no.18:36-56 '54. (MLRA 8:9)
(Air compressors) (Valves)

FRENKEL', M.

Methods of calculating the speed of a tow; for discussion.
Rech.transp. 14 no.11:22-23 N '55. (MLRA 9:2)
(Towing)

FRENKEL', M.I., dots., kand.tekhn.nauk

Power losses in valves of piston compressors and their dependence on spring loads. Izv.vys.ucheb.zav.; mashinostr. no.7/8:145-158 '58. (MIRA 12:8)

1. Leningradskiy tekhnologicheskiy institut kholodil'noy promyshlennosti.
(Valves) (Air compressors)

RUMANIA/Chemical Technology. Chemical Products and Their Applications. Chemical Processing of Natural Gases and Petroleum. Motor and Rocket Fuels. Lubricants. H

Abs Jour : Ref Zhur-Khimiya, No 6, 1959, 20964

Author : Ulcenco, N.; Maris, I.; Frenkel M.; Stanescu, C., Dragutan, V.

Inst : -

Title : Comparative Tests of 413, 312 and State Specification-5304 Oils on KD-35 Tractor Engines.

Orig Pub : An Inst. cercetari mecaniz. si electrif. agric., 1958, 2, 164-178

Abstract : Oil (O) tests were conducted on KD-35 engines: bench-test idling for 1000 hours and use for 1600 hours. The hard-to-get

Card : 1/2

RUMANIA/Chemical Technology. Chemical Products and Their Applications. Chemical Processing of Natural Gases and Petroleum. Motor and Rocket Fuels. Lubricants. H

Abs Jour : Ref Zhur-Khimiya, No 6, 1959, 20964

O 413 which is a standard, O 312 with 3 percent addition of Azniya-4 and O State Spec.-5304 (O 209 with 3 percent addition of Azniya-4) were tested. O State Spec.-5304 showed the best results, and is recommended for use. Proposals were also made for the improvement of the method of long tests of O in engines. -- A. Ravikovich

Card : 2/2

H-102

FRENKEL', M.I.

Calculation of the performance, in a theoretical cycle, of a piston compressor during the compression of real gases. Trudy LTIKHP 15:51-63 '58. (MIRA 13:4)

1. Predstavlena Kafedroy glubokogo okhlazhdeniya Leningradskogo tekhnologicheskogo instituta kholodil'noy promyshlennosti.
(Compressors)

FRENKEL', Mark Isaakovich; STRAKHOVICH, K.I., prof., retsenzent; KARATEYEV, S.N., inzh., red.; SIMONOVSKIY, M.Z., red.izd-va; DUDUSOVA, G.A., red.izd-va; SPERANSKAYA, O.V., tekhn.red.

[Piston compressors; theory, constructions, and fundamentals of design] Porshnevye kompressory; teoriia, konstruktsii i osnovy proektirovaniia. Izd.2., perer. i dop. Moskva, Gos.nauchno-tekhn. izd-vo mashinostroit.lit-ry, 1960. 654 p. (MIRA 13:11)
(Compressors)

82093
S/184/60/000/03/02/010

25.2000

AUTHOR: Frenkel', M.I., Candidate of Technical Sciences

TITLE: Direct-Flow Valves for Piston Compressors

PERIODICAL: Khimicheskoye mashinostroyeniye, 1960, No. 3, pp. 4 - 5

TEXT: New circular direct-flow valves for piston compressors were developed, built and tested at the Leningradskiy filial NIIKhIMMASha (Leningrad Branch of NIIKhIMMASh). The direct-flow valves are composed of elements, consisting in one self-springing plate, clamped between two seats. Grooves on the working surface of a seat serve as ducts, while the reverse side serves as a stop for the deflection of the plate of the adjoining element. The reverse side of the seat has a wedge-shaped bevel corresponding to the shape of the bent plate when the valve is open. The elements (Figure 2) forming the direct flow valve are fixed in a special clamping device and are machined on a lathe. They are then fastened by clamping rings. The seats of the direct-flow valve protrude over the free edges of the plates and form outlet diffusors to reduce the energy losses in the valve by 25%. The outlet ducts of the seats have varying depth with a conctraction of the free edge of the plates. This increases the flow pressure on the plate, facilitating the opening of the valve and reducing the friction in the ducts of

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the seat. No bottleneck materials are required for the manufacture of these valves. The plates are made of thin, heat-treated sheet steel. The seats can be machined from steel bands or can be cast of aluminum. Direct-flow valves have the advantage that the flow between parallel plates does not change its direction and that the flow-cross-section is larger than in conventional valves. They can be installed in the seats of conventional ring valves without any modification of the cylinder. Using direct-flow valves will increase the equivalent valve area by 2.5 times on the average, resulting in a piston speed increase of also 2.5 times. Limiting piston speed increase only to 1.5 times, a 25% reduction of the compressor weight will still result. The energy losses will be 2.7% lower than in conventional ring valves. Cheaper electric motors can be used due to increased rpm of the compressor. The main disadvantage of the direct flow valves is that they do not permit an output control to be made, since the pressure of the plates can not be adjusted. Direct-flow valves were tested at pressures of up to 16 kg/cm^2 and at 1,500 rpm. It can be assumed that these valves are also suitable for pressures of up to 50 kg/cm^2. Comparative tests of ring and direct-flow valves were carried out on standard air compressors "200B-10/8" (200V-10/8), "2P-20/8" ("2R-20/8) and "2BГ" (2V0). The tests show a higher efficiency of direct-flow valves resulting from a better filling of the cylinder and from a higher volumetric coefficient at a smaller dead space. Endurance tests show

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that direct-flow valves provide a considerably higher reliability of the compressors. The compressor efficiency and the power consumption remain constant. Depending upon the compressor type, direct-flow valves have sustained between 6,000 to 15,000 hours of operation. Direct-flow valves were also tested on a "5KG100/13" (5KG-100/13) three-stage coke oven gas compressor at the Moskovskiy koksogazovyy zavod (Moscow Coke Gas Plant), whose efficiency was increased by 8.6% after replacing the group valves by direct-flow valves. The specific power consumption was reduced by 5.25%. The saving in electric power totaled 300,000 kw/h or 50,000 rubles annually. This test is of interest from the viewpoint of compressor modernization in the chemical industry where group valves are frequently used on low pressure stages. The Leningrad Branch of NIIKhIMMASh has developed drawings of circular direct-flow valves for the majority of general purpose air compressors mass-produced by the Soviet industry. The large scale introduction of circular direct-flow valves for modernizing existing compressors can be achieved only by a centralized production, since only in this case an adequate quality can be combined with a simultaneous reduction of the production costs. There are 2 sets of diagrams, 1 photograph, 1 table and 3 sets of diagrams.

Card 3/3

VINNIKOV, Il'ya Zakharovich, inzh.; FRENKEL', Mikhail Isaakovich; KULIKOV, N.V., nauchnyy red.; BASHKOVICH, A.L., red.; SUSHKEVICH, V.I., tekhn.red.; TOKER, A.M., tekhn.red.

[Driller] Sverlovshchik. Moskva, Vsee.uchebno-pedagog.izd-vo Proftekhizdat, 1960. 198 p. (MIRA 14:3)
(Drilling and boring)

FRENKEL', M.I., kand.tekhn.nauk

Direct-flow valves for piston compressors. Khim. mash. no. 3:4-8 My-Je '60. (MIRA 14:5)

(Valves) (Compressors)

STRAKHOVICH, K.I., PROF.: FRENKEL', M.I., kand. tekhn. nauk; KONDRYAKOV, I.K., kand. tekhn.nauk; RIS, V.F., kand. tekhn. nauk. Prinimal uchastiye NOVOTEL'NOV, V.N., assistent; RUMYANTSEV, V.A., spets. red.; NIKOLAYEVA, N.G., red.; EL'KINA, E.M., tekhn. red.

[Compressors] Kompressornye mashiny. By K.I.Strakhovich i dr. Moskva, Gos.izd-vo torg.lit-ry, 1961. 600 p. (MIRA 15:1)

1. Kafedra glubokogo okhlazhdeniya Leningradskogo tekhnologicheskogo instituta kholodil'noy promyshlennosti (for Novotel'nov).
(Compressors)

FRENKEL', M.I., inzh.

Effect of shallow waters on the lift of an underwater wing of end span. Trudy LIVT no.1:37-47 '60. (MIRA 15:3)
(Planing hulls)

FRENKEL', M.I., inzh.

Propeller influence on the characteristics of underwater wings.
Sudostroenie 29 no.2:4-5 F '63. (MIRA 16:2)
(Hydrofoil boats) (Propellers)

FRANKEL', M.I., inzh.

Effect of the interaction between the propeller and wing on the hydromechanical characteristics of a hydrofoil boat. Trudy LIVT no.45:57-65 '63. (MIRA 17:6)

FRENKEL', M.I., inzh.; BERENBOYM, M.B., inzh.; MANDEL'BLAT, M.M., inzh.

Counter of volumetric productivity of conveyors. Stroi. i dor. mash. 10 no.10:19-20 O '65. (MIRA 18:10)

L 20980-66 EWT(1)/EWP(f)/T-2 WW

ACCESSION NR: AP5020852 UR/0122/65/000/008/0029/0033
621.512.004.6

AUTHOR: Frenkel', M. I. (Doctor of technical sciences)

TITLE: Application of rectilinear flow valves in piston compressors

SOURCE: Vestnik mashinostroyeniya, no. 8, 1965, 29-33

TOPIC TAGS: valve, gas flow, flow regulator, gas compressor, compressor design

ABSTRACT: A new kind of valve has been developed by the LenNIIKhIMMASh for air and gas compressors with the aim of improving their economy and reliability. The operational principle is illustrated in Fig. 1 on the Enclosure. In these valves the flexible blades (which close the apertures of the saddle) are oriented in the direction of the gas flow and deflect in a direction of 90° to the flow. The following advantages are claimed for this type of valve: 1) an improved coefficient of flow through the valve; 2) greater total area of apertures for the same outside dimensions of the valve; 3) reduced piston clearance; 4) better valve tightness which increases with use; 5) reduced wear (breakages occur after 3000-8000 hrs of operation; 6) power economy of 10-12%; 7) capacity increase of 6-8%. A lower resistance to the flow through the suction valve results in a lower temper-

Card 1/3

L 20988-66

ACCESSION NR: AP5020852

ature of the intake air (132.6C instead of 157.7C). This, together with a reduced piston clearance, improves the volumetric efficiency. The replacement of an occasionally broken flexible blade takes only 15 minutes. Valves with an O.D. of 450 mm are now in use. The design permits the substitution of the new type valve for the conventional type without any difficulties. Orig. art. has: 4 figures and 2 tables.

ASSOCIATION: none

SUBMITTED: 00 ENCL: 01 SUB CODE: IE,PR

NO REF SOV: 001 OTHER: 000

Card 2/3

L 20988-66
ACCESSION NR: AP5020852 ENCLOSURE: 01

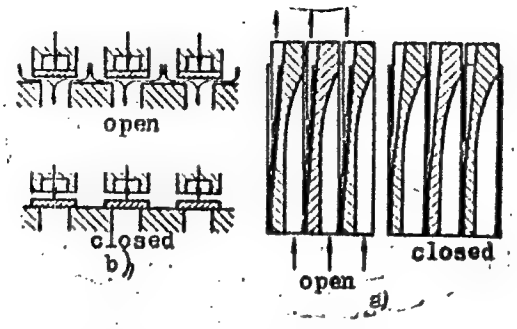


Fig. 1. Schematic drawings of the valves, showing the location of plates in: a- plane perpendicular to the gas flow; b- plane parallel to the gas flow (rectilinear flow valve)

Card 3/3 MJS

ACC NR: AP7004653 SOURCE CODE: UR/0432/66/000/001/0024/0025

AUTHOR: Frenkel', M. I.; Preobrazhenskiy, A. A.; Lapa, V. G.

ORG: none

TITLE: Apparatus for processing graphs and recorder charts

SOURCE: Mekhanizatsiya i avtomatizatsiya upravleniya, no. 1, 1966, 24-25

TOPIC TAGS: analog digital converter, computer input unit, graphic data processing, data processing equipment

ABSTRACT: A system is described for converting data from graphs and recorder charts into digital quantities which may be displayed on a digital voltmeter, typed by a typewriter, or punched on paper tape in a code which is compatible for direct entry into Minsk series computers. The system consists of a chart-moving mechanism, and a 450-mm long lever arm which is pivoted on one side and which follows the graph ordinate by radial motion on the other. The level angle of rotation is converted to current by the E-20 electro-mechanical transducer with subsequent digital coding. The total relative error resulting from nonlinearities of the reading and quantization error of digital processor is 1% of the full measurement scale. The equipment is capable of

Card 1/2 UDC: 681.142.4

ACC NR: AP7004653

amplitude resolution of 0.5 mm. Error caused by curvilinear lever arm motion increases with increasing arm rotation angle; it is 1.2% when this angle is 30°. Three hundred values may be processed by the machine in 20—40 sec. Orig. art. has: 2 figures. [WA-81] [BD]

SUB CODE: 09/ SUBM DATE: none/ ORIG REF: 002

Card 2/2

ACC NR: AP7002648 (A, N) SOURCE CODE: UR/0413/66/000/023/0195/0195

INVENTOR: Basin, A. M.; Frenkel', M. I.

ORG: None

TITLE: A hydrofoil boat with a hydraulic jet propulsion system. Class 65, No. 142899

SOURCE: Izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, no. 23, 1966, 195

TOPIC TAGS: hydrofoil, jet propulsion

ABSTRACT: This Author's Certificate introduces a hydrofoil boat with a hydraulic jet propulsion system consisting of a propeller and counterscrew located in a hydraulic jet tube. To raise the efficiency of the entire propulsion complex as well as to reduce the draft of the vessel, the suction opening of the hydraulic jet tube is located on the pressure surface of one of the supporting foils.

SUB CODE: 13/ SUBM DATE: 21Jan61

Card 1/1

AUTHOR: Frenkel', M. L. 68-58-7-19/27

TITLE: In the Coke Oven Department of the Nizhniy Tagil Metallurgical Combine (V koksokhimicheskom tsekhe N.-Tagil'skogo metallurgicheskogo kombinata)

PERIODICAL: Koks i Khimiya, 1958, Nr 7, p 58 (USSR)

ABSTRACT: 1) Bakelite lining of tubes of heat exchange equipment on the rectification plant was carried out in the summer of 1957. After 6 months operation an inspection indicated that lined tubes remained clean. A wide application of bakelite lining of other equipment is planned.
2) An experimental installation for preferential crushing of coal is being erected.
3) An experimental rendering of external walls of coal preparation plant with an addition of hydrophobic additive of a silicon organic compound is being carried out. If successful, the use of silicon organic compounds for treatment of internal walls of coal preparation plants to improve their washability will be considered.

Card 1/1

1. Coke--Production 2. Ovens--Equipment 3. Industrial plants --Equipment

AUTHOR: Frenkel', M.L. SOV/68-58-8-20/28

TITLE: In the Coke-oven Department of the N.-Tagil' Metallurgical Combine (V koksokhimicheskom tsekhe N.-Tagil'skogo metallurgicheskogo kombinata)

PERIODICAL: Koks i Khimiya, 1958, Nr 8, p 57 (USSR)

ABSTRACT: 1) A continuous naphthalene rectification plant is being designed. The use of a high-temperature, organic heat carrier is planned.
2) Industrial experiments on continuous washing of oils in the tar distillation plant were started.
3) Coking of blends containing 20% of gas coals (vM 38%) is being carried out.

1. Coke industry--USSR

Card 1/1

SOV/68-59-9-20/22

AUTHOR: Fronkel', M.L.

TITLE: The Coking Plant of the Nizhniy-Tagil Metallurgical Combine

PERIODICAL: Koks i khimiya, 1959, Nr 9, p 60 (USSR)

ABSTRACT: 1) The construction of the coal stock yard was completed. 2) An experimental ring furnace for continuous coking designed by the Institute of Chemical Technology imeni D.I.Mendeleyev in Moscow was built and started operation. In addition to other experiments (not specified) coking of non-caking coals will be tested.

Card 1/1

FRENKEL', M.L.

Coke by-product production at the Nizhniy Tagil Metallurgical Combine. Koks i khim. no.7:59 Jl '61. (MIRA 14:9)
(Nizhniy Tagil—Phthalic anhydride)

L 23803-66 EWT(m)/EWP(t) IJP(c) JD/JW/JG

ACC NR: AP6007256 SOURCE CODE: UR/0363/66/002/002/0325/0331

AUTHOR: Rezukhina, T.N.; Levitskiy, V.A.; Frenkel', M.Ya. 38 B

ORG: Moscow State University im. M.V. Lomonosov, Department of Chemistry (Moskovskiy gosudarstvennyy universitet, Khimicheskiy fakul'tet)

TITLE: Thermodynamic properties of barium and calcium tungstates

SOURCE: AN SSSR. Izvestiya. Neorganicheskiye materialy, v. 2, no. 2, 1966, 325-331

TOPIC TAGS: barium compound, calcium compound, tungsten compound, thermodynamic property, EMF

ABSTRACT: The article describes the use of the electromotive force method using a solid electrolyte to measure the properties of the above mentioned compounds. The measurements were made on apparatus described elsewhere in the literature (citations given). Most of the measurements were made in an atmosphere of inert gas, and some in a vacuum. The experimental results are shown in graphic and tabular form. The data is used to calculate the thermodynamic properties of mono- and tricalcium tungstate and tribarium tungstate. In the temperature interval from 1200-1590°K, measurements were made of the electromotive force of cells with a solid O⁻-electrolyte, containing tribarium and tribarium tungstate.

Card 1/2 UDC: 546.41'786 + 546.431'786

L 23803-66

ACC NR: AP6007256

In the temperature interval from 860-1060°, measurements were made of the electromotive force of a cell with a F^- electrolyte, containing $CaWO_4$. In the temperature interval studied, the reaction $2BaO + BaWO_4 \rightarrow Ca_3WO_6$ is characterized by significantly negative values of the isobaric potential. At the same time, ΔG_T^0 for the reaction $2CaO + CaWO_4 \rightarrow Ca_3WO_6$ has only a slight negative value. Orig. art. has: 13 formulas, 2 figures, and 6 tables.

SUB CODE: 07,20,11/SUBM DATE: 24Jun65/ ORIG REF: 012/ OTH REF: 011

Card 2/2

FRENKEL', M.M.

Hearing disorders and vestibular function in hypertension. Vest. oto-rin. 18 no.4:44-47 Jl-Ag '56. (MLRA 9:9)

1. Iz fiziologicheskogo otdela (zav. - prof. N.V.Timofeyev) Nauchno-issledovatel'skogo instituta bolezney ukha, gorla i nosa Ministerstva zdravookhraneniya RSFSR (dir. - zasluzhennyy deyatel' nauki prof. V.K.Trutnev) i poliklinik Ministerstva sel'skogo khozyaystva SSSR.

(HEARING DISORDERS, etiology and pathogenesis, hypertension (Rus))
(VESTIBULAR APPARATUS, diseases, caused by hypertension (Rus))
(HYPERTENSION, complications, hearing disord. & vestibular dis. (Rus))

FRENKEL', M. M.: Master Med Sci (diss) -- "The functional state of the auditory and vestibular analysors in hypertension". Moscow, 1959, 14 pp (Min Health RSFSR, Moscow Med Stomatological Inst) (KL, No 16, 1959, 110)

FRENKEL', M.M. (Moskva)

Otological symptoms of hypertension. Zhur. ush., nos. i gorl. bol. 19 no.5:68-72 S-O '59. (MIRA 14:10)

1. Iz patofiziologicheskogo otdela (zav. - kand.med.nauk B.M. Sagalovich) Nauchno-issledovatel'skogo instituta bolezney ukha, gorla i nosa Ministerstva zdravookhraneniya RSFSR.
(HYPERTENSION) (EAR--DISEASES)

RIVKIN, Solomon Abramovich; KORSHUNOV, Dmitriy Andreyevich; FREIKEL', Mariya Matveyevna; SHIKAN, T.M., red.; LEUSHCHENKO, N.L., tekhn. red.

[Precast reinforced concrete foundations for frame buildings] Sbornye zhelezobetonnye fundamenty karkasnykh zdanii; raschet i konstruirovanie. Kiev, Gos. izd-vo lit-ry po stroit. i arkhit. USSR, 1962. 135 p. (MIRA 15:4)

(Concrete footings)

LUKOV, B.N., prof. (Kuybyshev); PETROV, V.I., dotsent (Moskva); PAVLENKO, T.M., aspirant (Moskva); YERMOLAYEV, V.G., prof. (Leningrad); ADO, A.D., prof.; VOVSI, M.S., prof.; YERMOLAYEV, V.G., prof. (Leningrad); KUPRIYANOVA, N.A. (Kazan'); PETROV, G.I. (Moskva); DOLGOPOLOVA, A.V. (Moskva); SAKHAROV, P.P., prof.; BYKHOVSKIY, Z.Ye., prof.; MIN'KOVSKIY, prof. (Chelyabinsk); KHMEL'CHONOK, I.P. (Irkutsk); TEMKIN, Ya.S., prof. (Moskva); MIN'KOVSKIY, A.Kh., prof. (Chelyabinsk); MIL'SHTEYN, T.N., doktor med.nauk (Leningrad); TRUTNEV, V.K., zasluzhennyy deyatel' nauki, prof.; TSYRESHKIN, B.D., kand.med.nauk (Moskva); SOBOL', I.M., prof. (Stavropol'); TURIK, G.M. (Moskva); FRENKEL', M.M. (Moskva); MAZO, I.L.; POKRYVALOVA, K.P.; PROSKURYAKOV, S.A., prof.; ATKARSKAYA, A.A., prof.; GOL'DFARB, I.V., prof. (Izhevsk); PORUBINOVSKAYA, N.M. (Moskva); RUDNEV, G.P., prof.; VOL'FSON, I.Z., prof. (Stalingrad); DOROSHENKO, I.T., prof. (Kalinin); ROZENFEL'D, M.O., prof. (Leningrad); SHUL'GA, A.O., prof. (Orenburg); MIKHLIN, Ye.G., prof.; TRET'YAKOVA, Z.V. (Moskva); MANUYLOV, Ye.N., prof. (Moskva); DOROSHENKO, I.T., prof. (Kalinin); YERMOLAYEVA, V.G., prof.

Speeches in the discussion. Trudy gos. nauch.-issl. inst. ukha, gorla i nosa no.11:79-87,129-146,179-186,233-248,311-333 '59. (MIRA 15:6)

1. Chlen-korrespondent AMN SSSR (for Ado). 2. Direktor Moskovskogo gosudarstvennogo instituta ukha, gorla i nosa (for Trutnev).

(OTORHINOLARYNGOLOGY—CONGRESSES)

FRENKEL', M.M., inzh.

Automation of the control of continuous conveying systems. Mekh. i avtom.proiz. 14 no.6:32-42 Je '60. (MIRA 13:7)
(Electronic control)
(Conveying machinery)

L 07822-67

ACC NR: AR6027565 SOURCE CODE: UR/0272/66/000/005/0133/0134

AUTHOR: Frenkel', M. Ya.

TITLE: An instrument for checking bearing temperature

SOURCE: Ref. zh. Metrologiya i izmeritel'naya tekhnika, Abs. 5.32.993

REF SOURCE: Proizv. tekhn. sb. Tekhn. upr. M-va rechn. flota. RSFSR, no. 1(45), 1965, 34-36

TOPIC TAGS: temperature measurement, thermistor, remote control

ABSTRACT: The instrument described in this paper uses ten pickups for continuous remote monitoring of the temperature of several working units. When the ambient temperature of any of the pickups reaches a given value, an emergency warning signal is activated and the number of the given pickup is indicated. Pickup operation is based on the relay effect of a thermistor with a resistance which decreases sharply (by a factor of several hundred) when a certain ambient temperature is reached. The thermistor is hermetically sealed in the temperature-sensitive element. [Translation of abstract]

SUB CODE: 13

Card 1/1 UDC: 536.5.004.50:621.822.72

LEVITSKIY, V.A.; PINKHEL', M.Ya.; REZUKHINA, T.N.

Thermodynamic properties of calcium molybdate determined by electrochemical measurements at high temperatures. Elektrokhimiia 1 no.11:1371-1374 N '65. (MIRA 18:11)

1. Moskovskiy gosudarstvennyy universitet imeni Lomonosova.

VELISEYCHIK, I.V., inzh.; FRENKEL', M.Ye.

Mechanized laying and gravelling of railroad tracks in constructing secondary lines. Transp.stroi. 10 no.3:10-12 Mr '60. (MIRA 13:6)

(Railroads--Track)

VELISEYCHIK, I.V.; FRENKEL', M.Ye.

Treating rail joints with a graphite mixture. Transp. stroi. 13 no.7: 6 Jl '63. (MIRA 16:9)

1. Glavnyy inzh. tresta Kaztransstroy (for Veliseychik). 2. Glavnyy mekhanik tresta Kaztransstroy (for Frenkel').
(Railroads—Rails)

ISMAGILOVA, Roza Nurgaleyevna; PERSHITS, A.I., otv. red.; FRENKEL', M.Yu., red.; MIKHLINA, L.T., tekhn. red.

[Peoples of Nigeria; ethnic composition and bref ethnological characteristics] Narody Nigerii; etnicheskii sostav i kratkaia etnograficheskaia kharakteristika. Moskva, Izd-vo vostochnoi lit-ry, 1963. 273 p. (MIRA 16:9)
(Nigeria—Ethnology)

YAKOVLEV, Dmitriy Filippovich; KUZNETSKIY, Gennadiy Ivanovic; BESHKIN, Grigoriy Mikhaylovich; FRENKEL', M.Z., nauchnyy red.; SHAKHOVA, L.I., red.; NESMYSLOVA, L.M., tekhn.red.

[Training of electricians for work on high-voltage power transmission lines and substations]Podgotovka elektromonterov vysokovol'tnykh linii peredachi i podstantsii. Moskva, Proftekhizdat, 1961. 90 p. (MIRA 15:10)
(Electricians--Education and training)

FRENKEL, M.Z.

AGROSKIN, Iosif Il'ich, professor, d-r tekhn. nauk, redaktor; DMITRIYEV, Georgiy Timofeyevich, dotsent; PIKALOV, Fedor Illarionovich, professor; FRENKEL', M.Z., redaktor; SKVORTSOV, I.M., tekhn. redaktor

[Hydraulics] Gidravlika. Pod obshchei red. I.I.Agroskina. Moskva, Gos. renergeticheskoe izd-vo, 1954. 484 p. (MLRA 8:1)
(Hydraulics)

FRENKEL', N. Z., Cand Med Sci -- (diss) "Complex treatment of tuberculosis of the urinary bladder in the Southern Bank of the Crimea." Sochi, 1958. 157 pp; (Khabarovsk State Medical Inst); 200 copies; price not given; (KL, 21-60, 131)

FRENKEL', Naum Zakharovich; VASIL'YEV, O.F., redaktor; FRIDKIN, A.M., tekhnicheskiy redaktor.

[Hydraulics] Gidravlika. Izd. 2-oe, perer. i dop. Moskva, Gos. energ. izd-vo, 1956. 456 p. (MLRA 9:5)
(Hydraulics)

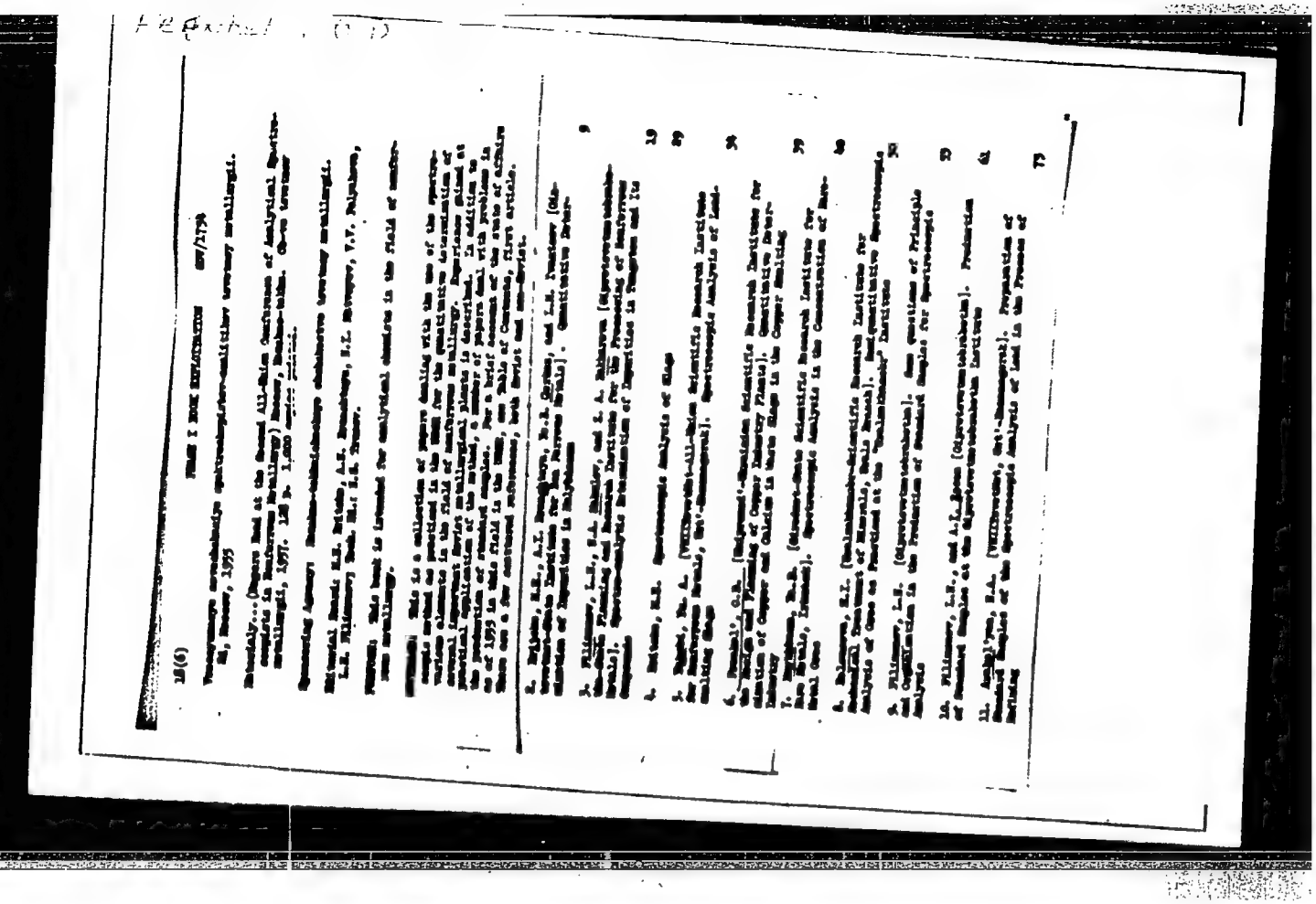
AGROSKIN, Iosif Il'ich, doktor tekhn. nauk, prof.; DMITRIYEV, Georgiy Timofeyevich, dots.[deceased]; PIKALOV, Fedor Illarionovich, prof.[deceased]; FRENKEL', N.Z., prof., red.

[Hydraulics] Gidravlika. Izd.4., perer. Moskva, Energiia, 1964. 351 p. (MIRA 18:3)

FRENKEL', O.B., inzhener

Horizontal-drill and pipe pushing machine. Mekh. stroi. 12 no.5: 25-27 My '55. (MLRA 8:6)

(Pipelines)



SOV/81-59-16-56924

Translation from: Referativnyy zhurnal. Khimiya, 1959, Nr 16, p 137 (USSR)

AUTHORS: Frenkel', O.D., Narbutovskikh, T.S.

TITLE: The Quantitative Determination of Copper and Calcium in Waste Slags of Copper Works by the Method of Spectral Analysis

PERIODICAL: V sb.: Materialy 1-go Ural'skogo soveshchaniya po spektroskopii, 1956. Sverdlovsk, Metallurgizdat, 1958, pp 113-116

ABSTRACT: In a carbon rod of 6 mm in diameter a longitudinal oval groove 1 mm deep and 4 mm wide (along the chord), is drilled, which is filled with the substance ground to 200 mesh; the rod is set in motion at a rate of 1.5 mm/sec. The spectra are excited in an a-c arc at 10 a with an upper carbon electrode and an arc gap of 1.5 mm and are photographed with an average quartz spectrograph with a 3-stage clearing agent and a slit 0.015 mm wide; 0.18 g of Ni are introduced into 1 g of the sample. The calibrating graphs in the coordinates ΔS, versus lgC are plotted by the lines (in A): Cu 2824.3-Ni 2821.2 and Ca 3179.9-Ni 3145.7. For eliminating the effect of third elements the samples and standards are diluted by a mixture (1 : 1) of soda and coal powder in the ratio of 1 : 1. The mean error of analysis at a threefold exposure of the spectra

Card 1/2

SOV/81-59-16-56924

The Quantitative Determination of Copper and Calcium in Waste Slags of Copper Works by the Method of Spectral Analysis

is 5% for Cu and 7% for Ca. The agreement of the results of chemical and spectral determinations is satisfactory.

G. Kibisov.

Card 2/2

NARBUTOVSKIKH, T.S.; FRENKEL', O.D.

Using moving carbon electrodes for the analysis of powders and solutions. Fiz.sbor. no.4:468-470 '58. (MIRA 12:5)

1. Ural'skiy nauchno-issledovatel'skiy proyektnyy institut mednoy promyshlennosti (UNIPROMED')
(Electrodes, Carbon) (Spectrum analysis)

FRANKEL, G.D

PHASE I BOOK EXPLOITATION SOV/4959

Ural'skoye soveshchaniye po spektrosk...

Materialy 2 Ural'skogo soveshchaniya po spektroskopii, Sverdlovsk, 1958 g. (Materials of the Second Urals Conference on Spectroscopy, Held in Sverdlovsk, 1958) Sverdlovsk, Metallurgizdat, 1959. 206 p. Errata slip inserted. 1,000 copies printed.

Sponsoring Agency: Ural'skiy filial Akademii nauk SSSR. Komissiya po spektroskopii and Ural'skiy dom tekhniki VSNTO.

Eds.: Aron Borisovich Shayevich and Gennadiy Pavlovich Slomyakov; Tech. Ed.: N. P. Fal'yuk.

PURPOSE: This collection of articles is intended for spectral analysis laboratory workers at ferrous and nonferrous metallurgical plants, and for laboratory personnel of the metal-working industry, geological and prospecting organizations, and similar scientific research laboratories.

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COVERAGE: The collection contains papers read at the Second Urals Conference on the spectral analysis of ferrous and nonferrous metals and alloys, slags, ores, agglomerates, refractories and other materials used in industry. The material of the conference includes articles on the analysis of steels (including the determination of gases), ferroalloys, nonferrous and light metals and alloys, pure noble metals, etc. The present volume is intended to disseminate the latest experience in working with spectral laboratories, and to report on the results of scientific research. The author thanks R. I. Gutkina and Yu. M. Buravlev. Almost all of the articles are accompanied by references.

TABLE OF CONTENTS:

[illegible], O. M.

O. M. Frenkel'and Ye. K. Antushevich. "On the problem of optical symptoms in military skull traumas", In the collection: Nevrologiya voyen. vremeni, Vol. 1, Moscow, 1949, p. 7[illegible]-90.

SO: U-411, 17 July 1953, (Letopis 'Zhurnal 'nykh Statey, no. 20, 1949)

CHLENOV, L.G.; IOSELEVICH, F.I.; ROLLE, S.D.; SOROKINA, N.V.; FRENKEL', O.M.

On changes of the analytical function in cases of hypertonic illness. Zh. Nevropat. Psikhiat., '52, 52, no.9, 28-35. (MLRA 5:9)
(PsA 27, no.8:6062 '53)

L 61024-65 EWT(l)/EWT(m)/EPF(n)-2/EWG(m)/EWP(v)/EPA(w)-2/T/EWP(t)/EWP(k)/EWP(b)
EWA(c) Pz-6/Po-4/Pf-4/Pi-4 IJP(c) JD/HW/AT
ACCESSION NR: AR5017412 UR/0137/65/000/006/V041/V041

62
B

SOURCE: Ref. zh. Metallurgiya, Abs. 6V265

AUTHOR: Farnasov, G. A.; Filippov, A. F.; Frenkel', P. G; Fridman, A. G.

TITLE: Experimental developments and new constructions in plasma melting apparatus

CITED SOURCE: Elektrotermiya. Nauchno-tekhn. sb., vyp. 42, 1964, 43-46

TOPIC TAGS: plasma arc, plasma jet, arc furnace, melting furnace

TRANSLATION: A plasma arc electric melting furnace was built in the ChSSR. A plasma arc heater was the heat source. Work is being carried out in the Physico technical Institute of the AN GDR on melting of tungsten in a closed bottom crystallizer. In the experimental apparatus, a plasma jet is formed between a tapered rod shaped tungsten cathode and a water cooled pure copper anode. In the United States, Alloid (Translator's Note=Sic) Electronics Corp. has developed an electron plasma electric furnace. Orig. art. has: 5 figures, 5 literature titles.
D. Kashayeva.

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ACCESSION NR: AR5017412

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SUB CODE: MM ENCL: 00

Card 2/2

L 26615-65 EMT(m)/EWA(d)/EWP(t)/EWP(k)/EWP(b) IJP(c) JD

ACCESSION NR: AP5005078 S/0130/65/000/002/0020/0022

AUTHOR: Farnasov, G. A.; Filippov, A. F.; Frenkel', P. G.; Fridman, A. G.

TITLE: Plasma in metallurgy

SOURCE: Metallurg, no. 2, 1965, 20-22

TOPIC TAGS: plasma furnace, plasma melting, metal melting furnace

ABSTRACT: An experimental plasma furnace with integrated mold bottom was built in East Germany in 1958 for melting tungsten wire. The temperature of the plasma jet is at least 9000C at 15-kw power. The plasma jet is 30 mm long. Another laboratory-size plasma furnace with movable mold bottom was built in Czechoslovakia. It melts 25-mm diameter ingots of low-carbon steel, pure iron, chromium, titanium and nimonic-type alloys. The surface of all ingots, except those of nimonic alloy, is smooth and bright. The iron ingots were dense and sound with a coarse-grained, homogeneous structure. Oxygen content in iron dropped from 0.15 to 0.0025% and in low-carbon steel from 0.030 to 0.0029%. Czechoslovak specialists maintain that

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L 26615-65

ACCESSION NR: AP5005078

the high quality of produced metal fully justified the immediate development of argon-plasma furnaces. Orig. art. has: 5 figures. [ND]

ASSOCIATION: none

SUBMITTED: 00	ENCL: 00	SUB CODE: ME, MM
NO REF SOV: 000	OTHER: 000	ATD PRESS: 3188

Card 2/2

L 27825-66 EWT(m)/EWP(t)/ETI IJP(c) JD

ACC NR: AP6015681 (N) SOURCE CODE: UR/0413/66/000/009/0078/0078

INVENTOR: Sakharov, Ye. S.; Frenkel', P. G.; Edemskiy, V. M.

40
B

ORG: none

TITLE: Cooling of vacuum arc furnace molds. Class 40, No. 181303

SOURCE: Izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, no. 9, 1966, 78

TOPIC TAGS: vacuum arc furnace, cooling, titanium

ABSTRACT: This Author Certificate introduces a method of cooling the molds of vacuum arc furnaces used for molding titanium and its alloys. In order to prevent explosion and to improve working conditions, the mold surface is cooled by a fluidized layer of passive material (for instance, quartz sand) in an atmosphere of inert gas (for instance, helium). [WW]

SUB CODE: 11, 13/ SUBM DATE: 16Feb65/ ATD PRESS: 5103

Card 1/1 PB UDC: 669.295:621.365.22.712

ACC NR: AP6017989 (N) SOURCE CODE: UR/0413/66/000/010/0090/0090

INVENTOR: Basalayev, G. V.; Lozinskiy, O. Yu.; Frenkel', P. G.

ORG: None

TITLE: A method for measuring and registering the temperature in plasma electric heating units. Class 42, No. 181845 [announced by the All-Union Scientific Research Institute of Electric Heating Equipment (Vsesoyuznyy nauchno-issledovatel'skiy institut elektrotermicheskogo oborudovaniya)]

SOURCE: Izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, no. 10, 1966, 90

TOPIC TAGS: temperature measurement, plasma heating, electronic measurement

ABSTRACT: This Author's Certificate introduces a method for measuring and registering the temperature in plasma electric heating units based on the generalized method of spectrum reversal. The procedure is designed for improved measurement accuracy as well as for obtaining more detailed information on temperature field distribution. The optical system of the pickup is mechanically oscillated with respect to the zone being monitored with an amplitude greater than the dimensions of this zone and in a direction normal to the optical axis of the pickup. Working signals are received when the optical axis of the pickup is passing through the zone being monitored, while calibration signals are received when the optical axis of the pickup passes

Card 1/2 UDC: 536.5.087:533.9

ACC NR: AP6017989

beyond the limits of this zone. A special device is used for scaling the signals on the basis of the generalized method of spectrum reversal with statistical averaging into a continuous signal proportional to the temperature of the object.

SUB CODE: 13, 09, 20/ SUBM DATE: 18Sep64

Card 2/2

FRENKEL', P. M.

USSR/Engineering Jan 47
Asbestos
Roofs

"Supporting Structure of Industrial Building with Asbestos Corrugated Sheeting," I. M. Balaban, P. M. Frenkel', Engr, L. N. Sherman, Architect, Promstroyproekt, 2½ pp

"Stroitel'naya Promshlennost'" No 1

The use of asbestos sheeting in industrial construction necessitates a change in the supporting structure from that used for previous methods because of the considerable decrease in the weight of the material. The article is particularly concerned with changes in supporting structures for roofs.

PA 28T22

FRENKEL', P.M., inzh.

Introducing roofs of industrial buildings made by industrial methods. Stroi.prom. 27 no.3:13-15 Mr '49.
(MIRA 13:2)

1. Promstroyproyekt.
(Roofing, Concrete) (Asbestos cement)